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Palynological analysis of bottom sediments of lake rubskoe (Ivanovo region, Russia)

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Abstract

© SGEM2018. The results of the palynological analysis of the sediment core recovered in Lake Rubskoe (Ivanovo Region, Russia) in 2015 are presented. An environmental reconstruction of Holocene and late Pleistocene vegetation, climate and lake dynamic was inferred. Pollen analysis has shown that vegetation of the area was dominated by Betula pendula, Pinus and Alnaster. Herbaceous were mostly represented by Artemisia, Chenopodiaceae. Sphagnum spores finding in the in the upper layers of core indicates a significant moisture content of the region and a warm climate, which explains the development of peat bogs in the study area. Four pollen zones have been identified in the diagram. Bottom of the core (zone PZ I) was characterized of low pollen concentrations. A decrease of forest vegetation and an increase of dry steppes vegetation were indicated of the last phase of the late Pleistocene. In upper layers of the core was presented a higher concentration of arboreal pollen. The concentration of herbs a simultaneous decrease. Zone PZ II corresponds to the late Dryas Pleistocene and early Holocene. The slight increase of Betula pendula pollen coincided with Allerod warming. Atlantic, boreal and preboreal periods (zone PZ III) characterized by a predominance of Betula pendula and Pinus pollen. The development of broad-leaved trees indicates the climatic optimum of the Holocene. Pollen zone IV coincided with the late Holocene. Here warming and cooling of the Subboreal and Subatlantic chronozone were noticeable.

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Keywords

Lake Rubskoe, Palynological analysis, Pollen

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